Livestock Grazing and Vegetation Management on Six Geographic Areas

Livestock Grazing Report

for the Little Horn Watershed Geographic Area

Prepared by:

Zachary N. Palm
Rangeland Management Specialist
Tongue Ranger District

Date

Note: Don’t use the Heading 1 style. It is reserved for chapter headings. It has some automatic functions built into it and will booger up your specialist report, and more importantly, the EIS documents, if you use it.

Introduction and Overview of Issues

This discussion addresses Livestock Grazing within the Tongue Ranger District portion of the Little Horn Watershed. It describes the affected environment and environmental consequences of alternatives to the proposed action relative to issues that have been developed as described in detail in Chapter 1. Issues identified as key and non-key will be used to compare the effects of the actions for each alternative. This Livestock Grazing Specialist Report will discuss the affected environment and identify effects of actions to the Socio/Economic issue.

This report is arranged to describe the affected environment and environmental consequences that apply to all allotments in the described area (Watershed-wide) and those that apply to specific allotments only (Allotment specific).

Affected environment descriptions and effects analyses were arrived at through review of Tongue RD 2210, 2230, and 2240 files, review of the Revised Forest Plan, and other handbook, manual, and internal reference material, along with personal experience of the authors. The analysis included review of livestock grazing reference material from the early 1900's, but focused approximately on the past 20 years. Spatial context is the Little Horn project area, with the exception of cumulative effects.

Table 3-1 lists Connected Actions, Past, Present, and Foreseeable Activities Relevant to Cumulative Effects Analysis.

Legal and Administrative Framework for this analysis:

- The Bighorn National Forest Land and Resource Management Plan (Forest Plan) revised 2005
- FSM2200 – this manual summarized laws and regulations governing rangeland management and forest planning.
- FSM2600 – this manual summarizes laws and regulations governing fish and wildlife management and forest planning.
- R-2 Rangeland Analysis and Management Training Guide
- FSH 2209.13 – Grazing Permit Administration Handbook
- Code of Federal Regulations (CFR) 36
    - ♦ 219 Planning
    - ♦ 222 Range Management
- National Forest Management Act (NFMA) of 1976 – this act identifies information requirements concerning NFS grazing and browsing resources.
- Section 8 of the Public Rangelands Improvement Act (PRIA) of 1978 – this section allows for consultation and cooperation in the development and execution of allotment management plans for grazing permits.
- Reorganization Act of 1994 amended the 1987 Agricultural Credit Act to provide for mediation of grazing permit cancellation and suspension actions as a part of the existing administrative appeals process.
- Section 504 of the Rescissions Act of 1995, Public Law 104-19, directs the Forest to complete site-specific National Environmental Policy Act Analysis and decisions on allotments

Actual use is expressed in terms of average Animal Unit Months (AUMs), derived from a review of authorized and actual use records from for the past ten years (2000-2009). Actual use records are incomplete, whereas authorized use records are complete. Authorized use information was used to fill in data gaps with actual use for determining current management.

Proposed use is based on a stocking rate of ~~2.5~~2.0 suitable acres per AUM. This stocking rate is based on research and experiences gained through the Tongue AMP implementation. It represents a maximum stocking level which can be sustained over the long term while moving vegetation towards/maintaining desired conditions.

Affected Environment

Watershed-wide

Grazing by domestic livestock has occurred on rangelands within the project area since the late 1800s. The industry has been an integral part of the local community economy, development, and lifestyle. For the livestock producers, summer forage on the Little Horn Watershed allotments represents a vital part of their total forage program. Term grazing permits for livestock grazing, normally issued for 10-year periods, are in effect on all allotments.

Permit holders pay a grazing fee for use of forage each year (set by a formula prescribed by law and executive order) and are required to abide by terms and conditions of their permit which address livestock and land ownership, rangeland improvements, resource concerns, management practices and requirements, etc. Implementation of required management practices and the long-term effects of livestock use on the environment are monitored, and adjustments are made, as needed, to assure compliance with permits and to address other resource concerns.

General desired rangeland vegetation conditions are described in the Forest Plan and are made more specific for individual allotments through the allotment level NEPA analysis and decision. Allowable forage utilization levels, along with other standards and guidelines, are developed in the analysis document as design criteria and are then stipulated on a site-specific basis. Key areas are identified for implementation monitoring. When livestock graze to allowable utilization levels or otherwise meet required standards, livestock are to be moved from the pasture by permit holders, or removed from the allotment for the season in the case of pastures grazed last in the rotation. The Forest Service Region 2 Rangeland Analysis and Management Guide provides information on documenting rangeland monitoring, inventory, analysis, and management activities.

Livestock grazing (and in some instances, grazing by large wild ungulates) tends to have the greatest influence on the following, which occur within the project area:

- Low-gradient riparian and wetland areas.
- Fine textured soils on relatively low slopes with a minimal amount of rock, cobble, or boulders.
- Open canopy or low shrub vegetation types.
- Areas near available water (although there may be some avoidance of standing water areas).

The magnitude of the influence depends on the timing of use, the kind of livestock (sheep vs. cattle), the intensity of grazing use, the duration and frequency of grazing, and the associated management practices, including the level of permittee interest and involvement. Stocking rates may be adjusted annually or permanently depending on resource conditions, monitoring findings and permittee effectiveness in implementing design criteria.

Grazing permits require that permittees keep livestock in designated areas. Fences on allotment and pasture boundaries, where no natural barriers to livestock movement exist, are commonly used to accomplish this. Water developments are another structural improvement available to manage livestock distribution. Non-structural management options include placement of salt and employing the services of a herder/rider. In some instances, structural improvements have been abandoned (removed from service) when other means have proved sufficient to meet standards. If a need is identified, these improvements may be reconstructed in the future without additional NEPA analysis and decision.

Structural range improvements are not a guarantee that livestock will remain in designated areas. To minimize the task of gathering and returning livestock a rapid response is necessary. This can incur considerable expense to the responsible permit holder, especially where access is limited and response time by permittees to livestock concerns can be very time-consuming.

Allotment Specific

Dry Fork Ridge C&H

The allotment encompasses 7,505 acres of the project area, with 618 acres considered suitable for grazing by cattle (Rangeland Vegetation specialist report).

Prior to 2006, Miller held separate permits for this allotment and the Lower Dry Fork C&H allotment totaling 1,313 AUMs. In 2006, Miller voluntarily combined both allotments under one permit and reduced total AUMs by 42%.

This allotment is permitted to be run in combination with the Lower Dry Fork C&H allotment, grazing 175 cow/calf pairs for a maximum season of 6/26 to 9/30 (if the Lower Dry Fork C&H allotment is first used), for a maximum of 764 AUMs under a three pasture deferred rotation grazing system. Actual use of the allotments is 695 AUMs (91% of permitted). Proposed use of the allotments would maintain actual AUMs.

There are six water developments, four and one third miles of fence and one cow camp associated with the allotment. Two water developments and one half mile of fence have been abandoned. Inspections during the 2009 grazing season revealed improvement maintenance, specifically relating to water developments, has been insufficient to preserve the value and effectiveness of the remaining improvements. This allotment is heavily reliant upon developed water sources to enable grazing of the existing suitable acres and the loss of these improvements would result in a reduction of suitable acres.

Lake Creek C&H

The allotment encompasses 29,228 acres of the project area, with ~~3,412~~3,411 acres considered suitable for grazing by cattle. Under current management (past 10 years), the East Burnt and Parks pastures of the Little Horn C&H allotment provide an additional 2,884 allotment acres, of which 469 acres are considered suitable for grazing by cattle (Rangeland Vegetation specialist report).

This allotment is permitted to graze 171 cow/calf pairs and 6 horses from 6/26 to 10/10 and 308 cow/calf pairs and 2 horses from 7/1 to 10/10 for a total of 2,192 AUMs. An additional 826 permitted AUMs and two pastures from the adjacent Little Horn C&H allotment have been included in management of the allotment in recent years under a five pasture deferred rotation grazing system. Actual use of the allotment (as currently managed) is 1,619 AUMs (54% of permitted). Proposed use of the allotment would ~~reduce total~~maintain actual ~~AUMs~~

~~to 1552 (52% of permitted)~~ and the two Little Horn C&H pastures would become pastures of the Lake Creek C&H allotment.

There are thirteen water developments, 10 miles of fence and one cow camp associated with the allotment. Four of the water developments (stock ponds) and one half mile of fence have been abandoned. Inspections during the 2009 grazing season revealed maintenance of the remaining improvements has been sufficient to maintain their value and effectiveness.

Some recreational horse use occurs on the allotment and can result in forage use and impacts to streams and vegetation that conflict with objectives and plans of term grazing permit holders.

Lower Dry Fork C&H

The allotment encompasses 7,167 acres of the project area, with ~~1,462~~1,460 acres considered suitable for grazing by cattle (Rangeland Vegetation specialist report).

Prior to 2008, two entities held permit to graze on the allotment. The Miller permit was authorized use of the Lower and Double Springs pastures of the allotment in rotation with the Dry Fork Ridge C&H allotment. The Manigault Estate permit was authorized to use the Cow Camp pasture in rotation with the West Pass C&H allotment. In 2006, Miller voluntarily combined this allotment and the Dry Fork Ridge allotment under one permit, reducing total AUMs by 42%. In 2008, the Manigault Estate permit was waived with preference to X Bar X Ranch, LLC. X Bar X Ranch chose to retain only the West Pass C&H permit provided, should future analysis indicate an adjustment to permitted AUMs in the West Pass allotment were necessary, they would be able to make use of half of the estimated capacity in the Cow Camp pasture. This would be roughly equivalent to their proportionate share of the allotment prior to either permittee voluntarily reducing permits. Both permittees were in agreement with this arrangement.

This allotment is permitted to be run in combination with the Dry Fork Ridge (DFR) C&H allotment, grazing 175 cow/calf pairs for a maximum season of 6/26 to 9/30 (if the Lower Dry Fork C&H allotment is first used), for a maximum of 764 AUMs, under a three pasture deferred rotation grazing system. Actual use of the allotments is 695 AUMs (91% of permitted). Proposed use of the allotments would maintain ~~actual~~ permitted AUMs.

There are six water developments, three and one half miles of fence and a cow camp associated with the allotment. Two water developments and three quarters of a mile of fence have been abandoned, including the Double Springs Drift Fence (619393), effectively making the Lower Dry Fork/Dry Fork Ridge rotation a two pasture deferred rotation system. Inspections during the 2009 grazing season revealed improvement maintenance has been insufficient to preserve the value and effectiveness of most of the remaining improvements. Five of the six water developments were located, only two of which were functional.

West Pass C&H

The allotment encompasses 2,471 acres of the project area, with 884 acres considered suitable for grazing by cattle (Rangeland Vegetation specialist report).

In 2008, X-X Ranch, LLC voluntarily reduced season of use on their permit by deferring their on-date from 6/30 to 7/11, reducing permitted AUMs by 22%.

This allotment is permitted to graze 166 cow/calf pairs from 7/11 to 9/30, for a total of 591 AUMs, under a season long grazing system. Actual use of the allotment is 443 AUMs (75% of permitted). Proposed use of the allotment would maintain ~~actual~~ permitted AUMs.

There are two water developments, one corral and one and one half miles of fence associated with the allotment. One water development, the corral and one mile of fence (the Upper/Lower pasture division) have been abandoned. Inspections during the 2009 grazing season revealed maintenance has been sufficient to maintain the value and effectiveness of the remaining improvements.

Environmental Consequences

Watershed-wide

Alternative 1, No action no grazing: Direct and Indirect effects

This alternative would eliminate domestic livestock grazing on all allotments within Little Horn Watershed. Existing permits would be cancelled with one year notice as specified in FSH 2209.13 section 16.13 and 36 CFR 222.4(a)(8). New term grazing permits would not be issued. Domestic livestock would not be used to manipulate vegetative conditions in this portion of the Forest. There would be no need to apply livestock grazing standards and guidelines to these allotments. Maintenance of improvements by grazing permittees would not be necessary, required, or completed.

Part of objective 2, strategy 1 of the revised Bighorn National Forest Plan would not be met, while part would. ("Provide forage for livestock at a level that strives to maintain or exceed the year 2004 permitted stocking level of 113,800 Animal Unit Months (AUMs), while recognizing that stocking levels may be adjusted through the implementation of allotment management plans (AMPs) and administration of grazing permits.").

Benefits of livestock grazing to the local economy, community lifestyle and tradition and culture would be reduced. Effects of this loss of AUMs would extend from the individual permit holder(s) on each allotment to the community as a whole.

Grazing permittees may be reimbursed for their portion of range structural improvements on the allotment (36 CFR 222.6). Fencing, spring developments, and cow camps not needed would be removed.

Alternative 2, Current Management: Direct and Indirect effects

Under Alternative 2, livestock grazing would continue at current stocking levels.

Should rangeland conditions deteriorate, more strict standards would likely result in a loss of AUMs through shortened seasons of use, reduced livestock numbers or a combination of both. The loss of these AUMs could be limited with intensified management, such as the use of a rider, at greater expense to the permit holder. Effects of this loss of AUMs would extend from the individual permit holder to the community as a whole. The probability of rangeland condition deterioration, and associated AUM loss, is greater under alternative 2 than alternative 3.

Part of objective 2, strategy 1 of the revised Bighorn National Forest Plan would not be met, while part would. ("Provide forage for livestock at a level that strives to maintain or exceed the year 2004 permitted stocking level of 113,800 Animal Unit Months (AUMs), while recognizing that stocking levels may be adjusted through the implementation of allotment management plans (AMPs) and administration of grazing permits.").

Existing range improvements would be maintained as specified in the term grazing permit, but no new improvements would be added without additional NEPA analysis and decision.

Alternative 3, Adaptive management: Direct and Indirect effects

Under Alternative 3, livestock grazing would continue at reduced stocking levels.

Should rangeland conditions deteriorate, more strict standards would likely result in a loss of AUMs through shortened seasons of use, reduced livestock numbers or a combination of both. The loss of these AUMs could be limited with intensified management, such as the use of a rider, at greater expense to the permit holder. Effects of this loss of AUMs would extend from the individual permit holder to the community as a whole. The probability of rangeland condition deterioration, and associated AUM loss, is lower under alternative 3 than alternative 2.

Part of objective 2, strategy 1 of the revised Bighorn National Forest Plan would not be met, while part would. ("Provide forage for livestock at a level that strives to maintain or exceed the year 2004 permitted stocking level of 113,800 Animal Unit Months (AUMs), while recognizing that stocking levels may be adjusted through the implementation of allotment management plans (AMPs) and administration of grazing permits.").

Existing range improvements would be maintained as specified in the term grazing permit. New improvements proposed as part of the adaptive options would be available and implemented.

Cumulative effects for all alternatives:

Livestock have had effects on the project area allotments at the same time as many other uses, and some effects are cumulative. Motorized and non-motorized recreation and roads result in soil disturbance and erosion. As noted in the soils section, there are likely similar effects from livestock. Although the effects from livestock are too small to quantify, they do cumulatively add to effects from roads, and vehicular use. Wildlife and livestock both impact vegetation by removing forage. Historically high stocking levels of livestock, and at times big game, have had a lasting effect on vegetative cover, composition and overall health. Those effects have declined over time but are still present to some degree. Removal of fine fuels vegetation by livestock or wildlife can also have the cumulative effect of reducing wildfire occurrence and rate of spread (see wildfire section). Fire suppression, possibly combined with removal of competing herbaceous vegetation, has resulted in conifer encroachment, reducing suitable acres (available forage) in some areas, that is expected to increase over time. Past timber harvest areas provided transitory rangeland at one time but this effect has largely passed with increasing conifer cover. Previous stocking rates may have been based, to a degree, on the availability of that transitory forage resource.

Livestock grazing in this area today is complicated by factors such as the allocation of forage resources between livestock and wildlife and the effects of their activities, fisheries, and water quality; considerations necessary due to wildfire and prescribed fire management, recreation activities that result in gates being left open, forage being removed, livestock being poorly distributed, or impacts to the resource being unfairly attributed to livestock grazers. Most of these factors add to complexity and expense of the livestock operation that chooses to utilize forage in the project area as opposed to other sources of forage. Combined, these factors add expense to the permit, and may result in reduction in livestock grazing over time. However, private forage resources are very scarce and expensive in the local area. Forage availability on the National Forest provides a critical need for permit holders overall operations.

Livestock management is generally considered more difficult on National Forest lands than on private lands for reasons described above. In addition, the business of livestock management is subject to factors most often not under the control of livestock operators, such

as national security, tourism, land values and subsequent subdivision of base ranches, retirement of 'baby-boomers', labor prices and availability, foreign markets and lamb/calf prices, USDA budgets and farm programs, fuel prices, predator control, social values, federal policy, etc.

Authorized use on the project area allotments has generally been lower than permitted and is likely to remain so. Recent NEPA decisions (e.g., Tongue, Piney, and Battle Park AMPs) have projected a decline in permitted AUMs. Alternative 1 would add the most to the trend of decreasing the number of AUMs grazed on the Bighorn NF, with Alternative 3 potentially adding the least, to the extent that the design criteria and adaptive measures are successful at meeting desired conditions. Improved forage production by reducing sagebrush densities and improved distribution opportunities created by the proposed water improvements and other structural improvements should allow permitted AUMs under Alternative 3 to remain higher than under Alternative 2.

Expectations are that the impact of recreation uses in the project area will increase as the population of the local communities increase. ATV use in particular has seen a dramatic increase recently that is expected to continue (see Specialist Report for Recreation). Locally, the current boom in coalbed methane activity in the Powder River Basin has resulted in more demand for recreational use of the Bighorns, particularly for motorized uses, and this demand expected to continue.

Use of prescribed fire will likely increase in coming years due to a nationwide emphasis on fuels reduction. As described above, this can result in short term expenses and long-term benefits to livestock grazing.

Cumulative effects under alternative 3 will be less than alternative 2 due to the adaptive management measures available.

Allotment Specific

Dry Fork Ridge C&H

Alternatives 1, 2 and 3: Direct and Indirect effects

No additional effects were identified beyond those described in the watershed-wide discussion above.

Cumulative effects for all alternatives:

No additional effects were identified beyond those described in the watershed-wide discussion above.

Lake Creek C&H

Alternative 1 No action no grazing: Direct and Indirect effects

There would be no conflicts between domestic livestock grazing and recreation uses under alternative 1.

Alternative 2 Current Management: Direct and Indirect effects

Potential conflicts between domestic livestock grazing and recreation uses would be more likely under alternative 2 than under alternative 3.

Alternative 3 Adaptive management: Direct and Indirect effects

Potential conflicts between domestic livestock grazing and recreation uses would be less likely under alternative 3 than under alternative 2.

Additional improvement construction included as options in adaptive planning would provide opportunities for time and energy savings on the part of the permittee, and increased economic efficiency. Livestock distribution would be improved. This would add to flexibility in management and a greater likelihood of meeting the portion of Forest Plan Strategy #1 for livestock grazing that states "Strive to authorize grazing for domestic livestock that will provide stable livestock numbers and season of use." (Revised BNF Plan page 1-8). It would also support the portion of that strategy that directs management to strive to maintain or exceed the 2004 permitted stocking level of AUMs Forest wide.

Cumulative effects for all alternatives:

No additional effects were identified beyond those described in the watershed-wide discussion above.

Lower Dry Fork C&H

Alternatives 1, 2 and 3: Direct and Indirect effects

No additional effects were identified beyond those described in the watershed-wide discussion above.

Cumulative effects for all alternatives:

No additional effects were identified beyond those described in the watershed-wide discussion above.

West Pass C&H

Alternatives 1, 2 and 3: Direct and Indirect effects

No additional effects were identified beyond those described in the watershed-wide discussion above.

Cumulative effects for all alternatives:

No additional effects were identified beyond those described in the watershed-wide discussion above.

Compliance with Forest Plan and Other Relevant Laws, Regulations, Policies and Plans

In maintaining 2004 stocking levels, alternative 1 would be the least in compliance with the Forest Plan while alternative 2 would be the most inclined to meet Forest Plan Strategies.

~~Alternative 1 would be the least in compliance with the Forest Plan because AUM's would not be maintained. Alternative 2 would be the most inclined to meet Forest Plan Strategies.~~

Monitoring Recommendations

None other than specified in Chapter 1 and Chapter 2 of DEIS.

References

2210, 2230 and 2240 Files, Tongue District, Bighorn National Forest, USDA Forest Service
Bighorn National Forest Land and Resources Management Plan, Revised 2005
Table 4, Potential Cumulative Effects Considerations
Table 2-4: Adaptive Strategies
Attachment B Permitted
Attachment B1Authorized Use Data

Attachment B3 Actual Use Data
Bighorn National Forest Vegetation Grazing Guidelines (USDA Forest Service, Revised 2007)
Attachment A, Rangeland Suitability analysis for Tongue District Little Horn Watershed Allotments
Supplement 1-2, Desired Condition for the "Big Six" Project Area
Table 1-2, Desired Conditions and Benchmark Sites
Table 3, Key Areas and Benchmark Sites
Specialist Report for Rangeland Vegetation for Tongue District Little Horn Watershed Allotments
Rangeland Analysis and Management Training Guide, Region 2, USDA Forest Service 1996